QUIETSIDE

INSTALLATION MANUAL

Model: QSFMO-D2
QSFMO-T3
QSFMO-Q4
(Refrigerant:R410A)

Part Ⅱ : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions: Important!

Please read the safety precautions carefully before installation and maintenance.
The following contents are very important for installation and maintenance.

Please follow the instructions below.

●The installation or maintenance must accord with the instructions.
●Comply with all national electrical codes and local electrical codes.
●Pay attention to the warnings and cautions in this manual.
●All installation and maintenance shall be performed by distributor or qualified person.
●All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
●Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.

Warnings

Electrical Safety Precautions:

1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.
3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
4. Make sure each wiring terminal is connected firmly during installation and maintenance.
5. Have the unit adequately grounded. The grounding wire can't be used for other purposes.
6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
8. The power cord and power connection wires can't be pressed by hard objects.
9. If power cord or connection wire is broken, it must be replaced by a qualified person.
10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.
11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 9.84ft.
12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.
13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.
14. Replace the fuse with a new one of the same specification if it is burnt down; don't replace it with a cooper wire or conducting wire.
15. If the unit is to be installed in a humid place, the circuit breaker must be installed.

Installation Safety Precautions:

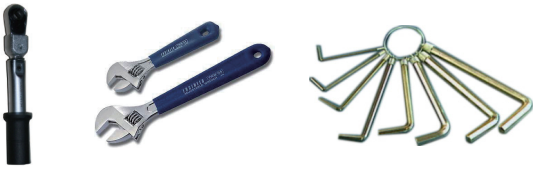
1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)
2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 44.09lbs.
3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.
4. Ware safety belt if the height of working is above 6.56ft.
5. Use equipped components or appointed components during installation.
6. Make sure no foreign objects are left in the unit after finishing installation.

Refrigerant Safety Precautions:

1. Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.
2. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.
3. Make sure no refrigerant gas is leaking out when installation is completed.
4. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.
5. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

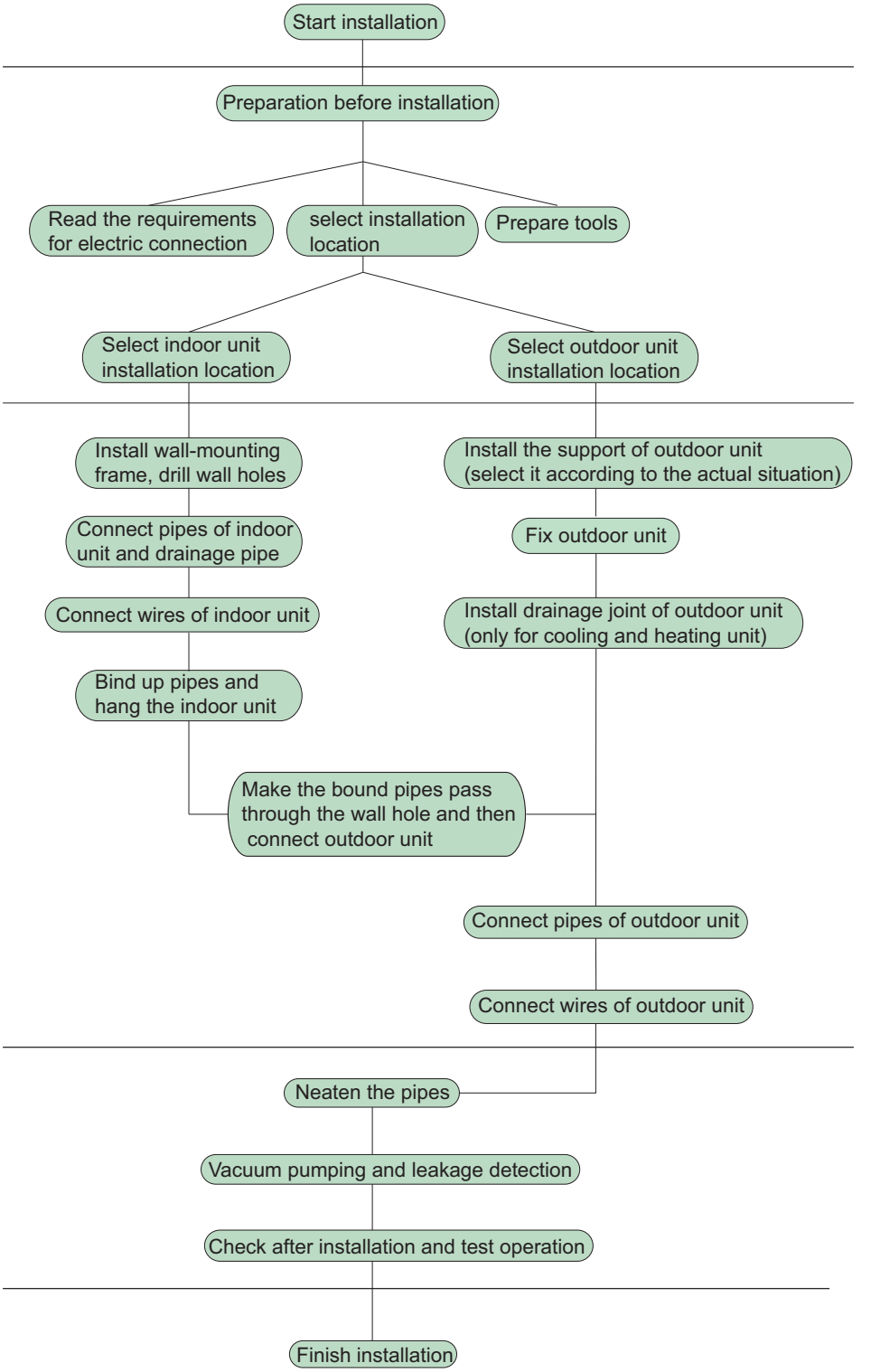
Improper installation may lead to fire hazard, explosion, electric shock or injury.

Main Tools for Installation and Maintenance

1. Level meter, measuring tape	**2. Screw driver**	**3. Impact drill, drill head, electric drill**
4. Electroprobe	**5. Universal meter**	**6. Torque wrench, open-end wrench, inner hexagon spanner** 
7. Electronic leakage detector	**8. Vacuum pump**	**9. Pressure meter**
10. Pipe pliers, pipe cutter	**11. Pipe expander, pipe bender**	**12. Soldering appliance, refrigerant container**

8. Installation Manual

Installation procedures


Start installation
Preparation before installation
Read the requirements for electric connection
select installation location
Prepare tools
Select indoor unit installation location
Select outdoor unit installation location
Install wall-mounting frame, drill wall holes
Install the support of outdoor unit (select it according to the actual situation)
Connect pipes of indoor unit and drainage pipe
Fix outdoor unit
Connect wires of indoor unit
Install drainage joint of outdoor unit (only for cooling and heating unit)
Bind up pipes and hang the indoor unit
Make the bound pipes pass through the wall hole and then connect outdoor unit
Connect pipes of outdoor unit
Connect wires of outdoor unit
Neaten the pipes
Vacuum pumping and leakage detection
Check after installation and test operation
Finish installation

Note: this flow is only for reference; please find the more detailed installation steps in this section.

8.1 Installation Dimension Diagram

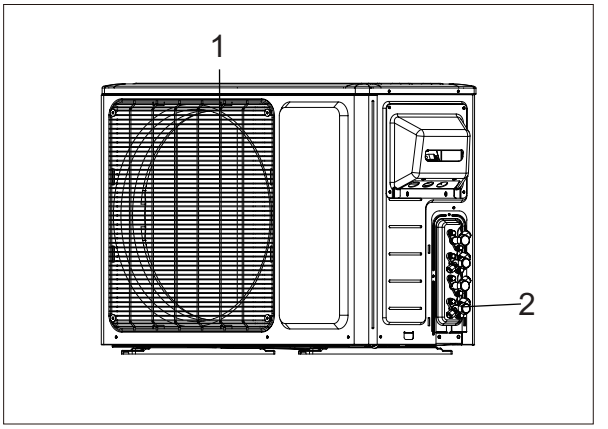
QSFMO-D2

Warning

- Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditionercabinet).
- This product must not be disposed together with the domestic waste.This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.
- The temperature of refrigerant circuit will be high,please keep the interconnection cable away from the copper tube.

OUTDOOR UNIT	
No.	Description
1	Air outlet grille
2	Valve

Note:the above figures are only intended to a simple diagram of theappliance and may not correspond to the appearance of the units that have been purchased.



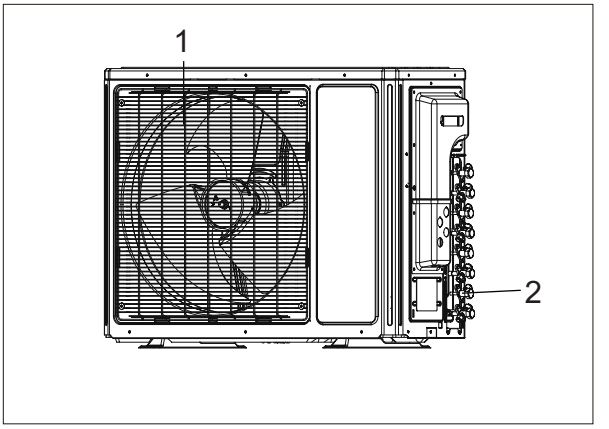
QSFMO-T3 QSFMO-Q4

Warning

- If the supply cable is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Be sure to cut off the power supply before cleaning the air conditioner;otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth moist cloth clean the air conditioner cabinet).
- Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
- The temperature of refrigerant circuit will be high,please keep the interconnection cable away from the copper tube.

OUTDOOR UNIT	
No.	Description
1	Air outlet grille
2	Valve

Note: the above figures are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.



8.2 Installing the Outdoor Unit

Location

⚠ Use bolts to secure the unit to a flat, solid floor. When mounting the unit on a wall or the roof, make sure the support is firmly secured so that it cannot move in the event of intense vibrations or a strong wind.

● Do not install the outdoor unit in pits or air vents

Installing the pipes

⚠ Use suitable connecting pipes and equipment for the refrigerant R410A.

⚠ The refrigerant pipes must not exceed the maximum lengths .

Models(ft)	QSFMO-D2	QSFMO-T3 QSFMO-Q4
Max.connection pipe length	65.6	22.9
Max.connection pipe length (Simple one indoor unit)	32.8	65.6

The refrigerant pipes must not exceed the maximum heights 16.4ft(QSFMO-D2) 32.8ft(QSFMO-T3/QSFMO-Q4).

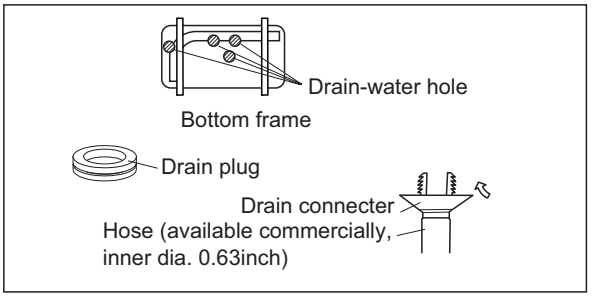
⚠ Wrap all the refrigerant pipes and joints.

⚠ Tighten the connections using two wrenches working in opposite directions.

Caution: Installation Must be Performed in Accordance with the NEC/CEC by Authorized Personnel Only.

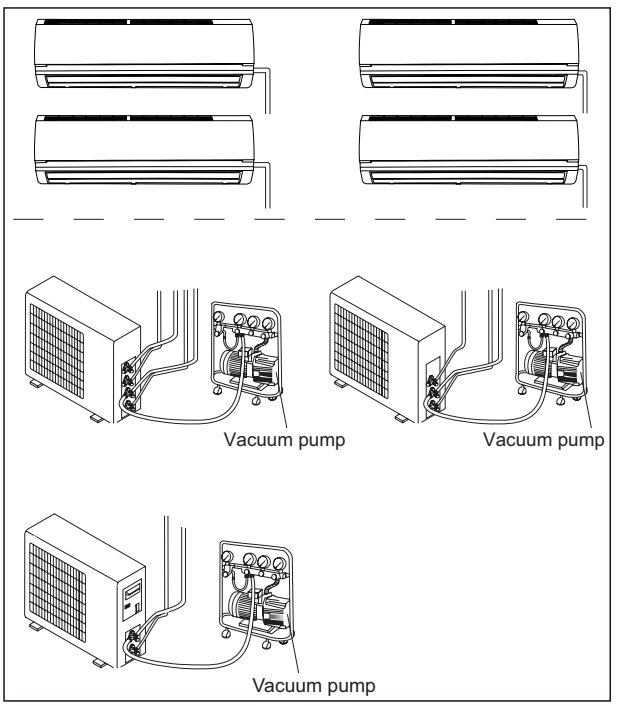
Install the drain fitting and the drain hose (for model with heat pump only)

Condensation is produced and flows from the outdoor unit when the appliance is operating in the heating mode. In order not to disturb neighbours and to respect the environment, install a drain fitting and a drain hose to channel the condensate water. Install the drain fitting and rubber washer on the outdoor unit chassis and connect a drain hose to it as shown in the figure.



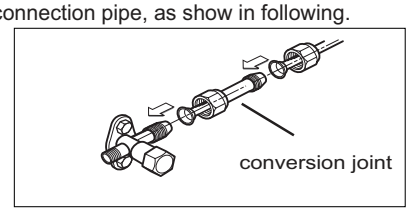
Humid air left inside the refrigerant circuit can cause compressor malfunction. After having connected the indoor and outdoor units, bleed the air and humidity from the refrigerant circuit using a vacuum pump.

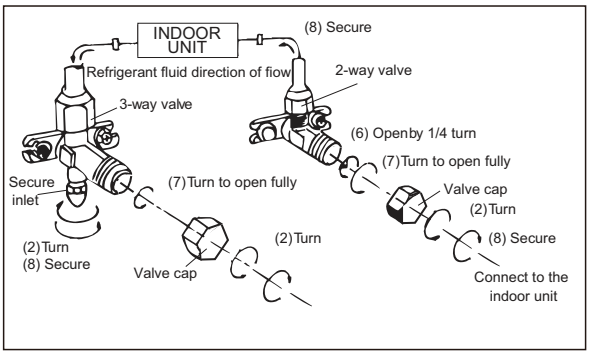
(1) Unscrew and remove the caps from the 2-way and 3-way valves.
(2) Unscrew and remove the cap from the service valve.
(3) Connect the vacuum pump hose to the service valve.
(4) Operate the vacuum pump for 10-15 minutes until an absolute vacuum of 0.39 inch Hg has been reached.
(5) With the vacuum pump still in operation, close the low-pressure knob on the vacuum pump coupling. Stop the vacuum pump.
(6) Open the 2-way valve by 1/4 turn and then close it after 10 seconds. Check all the joints for leaks using liquid soap or an electronic leak device.
(7) Turn the body of the 2-way and 3-way valves. Disconnect the vacuum pump hose.
(8) Replace and tighten all the caps on the valves.



Diameter (inch)	Twisting moment (N.m)
Φ0.24	15-20
Φ0.37	35-40
Φ0.63	60-65
Φ0.47	45-50
Φ0.75	70-75

(9) If the specification of outdoor unit gas valve is 3/8″ , but curstomer needs to install 1/2″ indoor unit so that it is need to use a “pipe joint subassembly” (Code 06643008) to make a conversion joint with outdoor unit gas valve and connection pipe, as show in following.

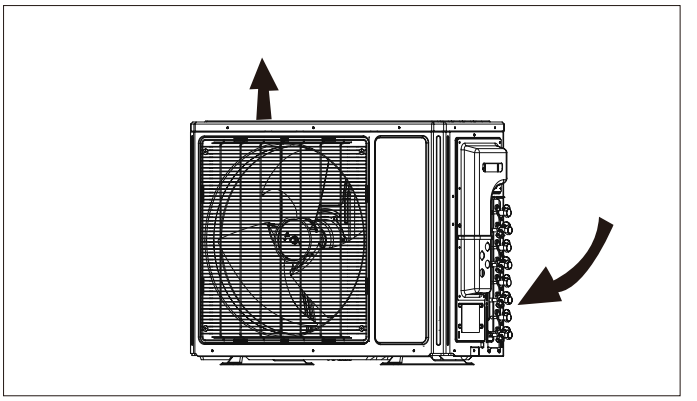




⚠ Use suitable instruments for the refrigerant R410A.

● Do not use any other refrigerant than R410A.

⚠ Do not use mineral oils to clean the unit.



INSTALLATION DIMENSION DIAGRAM

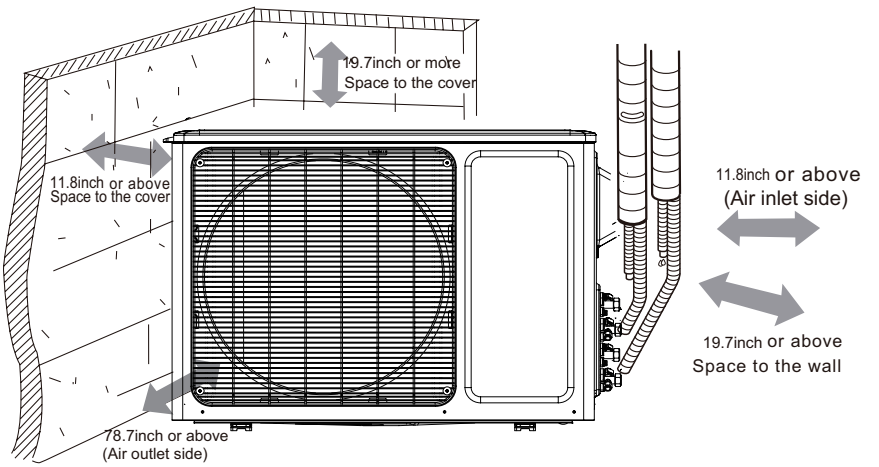
⚠ The installation must be done by trained and qualified service personnel with reliability according to this manual.

⚠ Contact service center before installation to avoid the malfunction due to unprofessional installation.

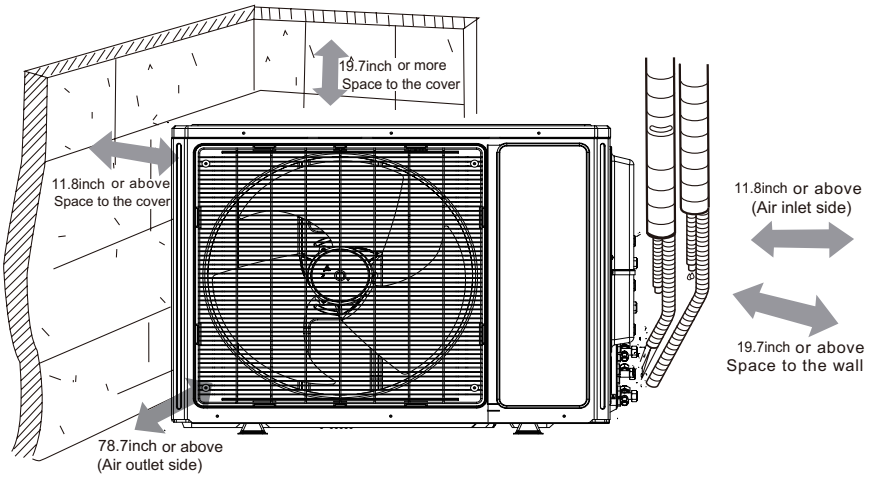
⚠ When picking up and moving the units, you must be guided by trained and qualified person.

⚠ Ensure that the recommended space is left around the a ppliance .

QSFMO-D2



QSFMO-T3 QSFMO-Q4

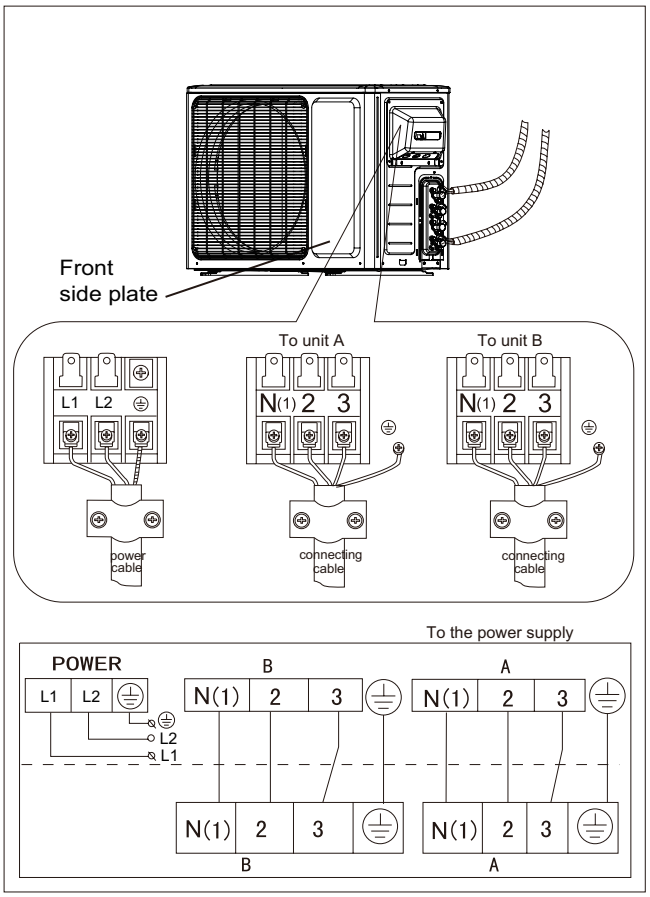


This is just the schematic plan, please refer to the actual product.

8.3 Electrical Connections

QSFMO-D2

1. Remove the handle at the right side plate of the outdoor unit (six screw).
2. Remove the cable clamp, connect the connection cable and power cable with the terminal at the row of connection and fix. the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
3. Fix power connection wire by wire clamp.
4. Ensure wire has been fixed well.
5. Install the handle.



⚠ An all-pole disconnection switch having a contact separation of at least 0.12inch in all pole should be connected in fixed wiring.

⚠ Wrong wire connection may cause malfunction of some electric components.After fixing cable, ensure that leads between connection to fixed point have some space.

⚠ The connection pipes and the connectiong wirings of the unit A and unit B must be corresponding to each other respective.

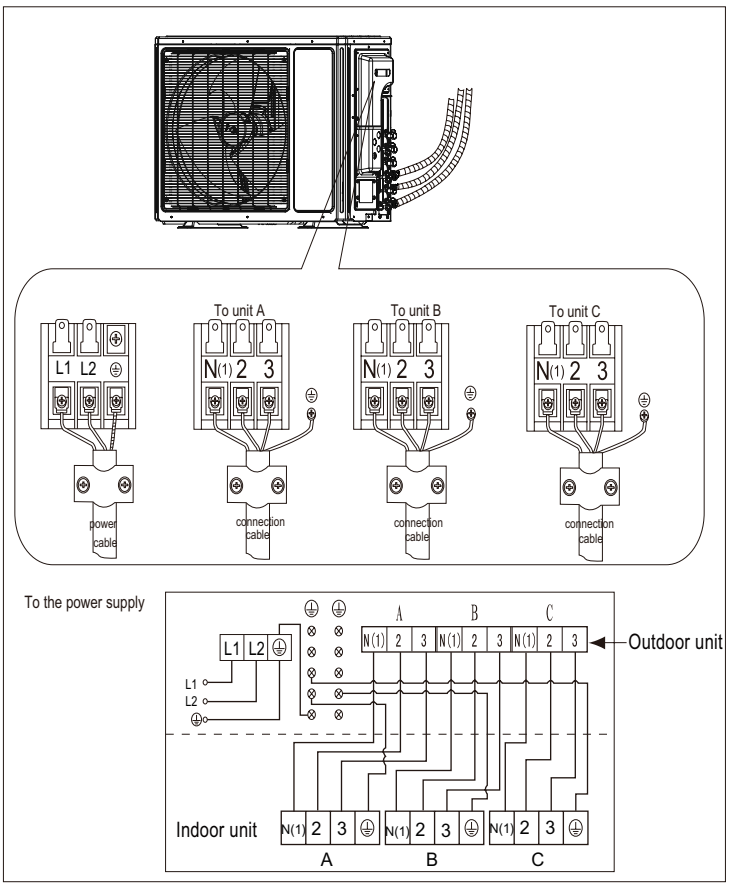
⚠ The appliance shall be installed in accordance with national wiring regulations.

Note: the above figures are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.

All power cables and connection cables must be protected with conduits.

QSFMO-T3

1. Remove the handle at the right side plate of the outdoor unit (ten screw).
2. Remove the cable clamp, connect the connection cable and power cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit. terminal of line bank. Wiring should meet that of indoor unit.
3. Fix power connection wire by wire clamp.
4. Ensure wire has been fixed well.
5. Install the handle.



⚠ An all-pole disconnection switch having a contact separation of at least 0.12inch in all pole should be connected in fixed wiring.

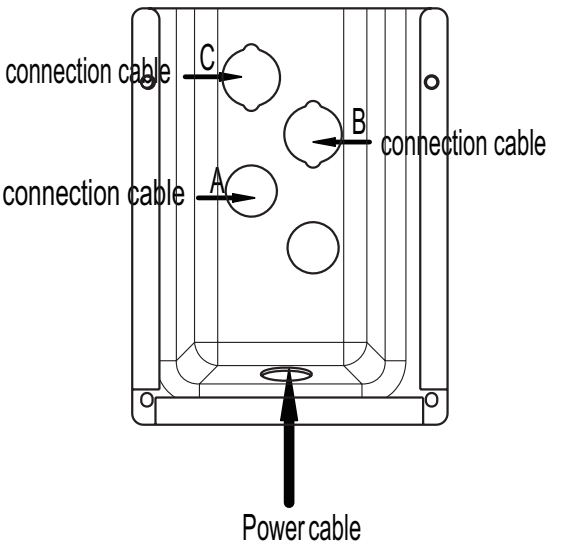
⚠ Wrong wire connection may cause malfunction of some electric components.After fixing cable, ensure that leads between connection to fixed point have some space.

⚠ The connection pipes and the connectiong wirings of the unit A ,unit B and unit C must be corresponding to each other respective.

⚠ The appliance shall be installed in accordance with national wiring regulations.

⚠ Do not install the outdoor unit where it is exposed to the sunlight.

Note:the above figure are only intended to be a simple diagram of the appliance and may not correspond to the appearance of the units that have been purchased.

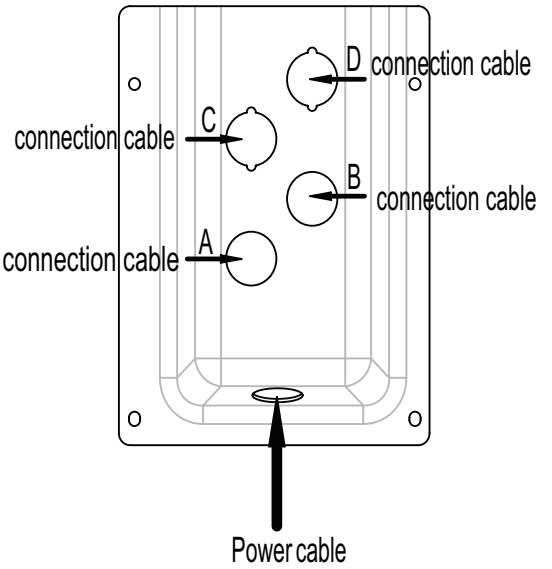


1) The power cable should be put in from the hole under connection cable cover.
2) If connecting with two indoor units, the connection cable should be put in from hole A and hole B.
3) If connecting with three indoor units, the connection cable should be put in from hole A , B and C.
4) If connecting with four indoor units, the connection cable should be put in from hole A, B , C and D.

All power cables and connection cables must be protected with conduits.

QSFMO-Q4

1. Remove the handle at the right side plate of the outdoor unit (ten screw).
2. Remove the cable clamp, connect the connection cable and power cable with the terminal at the row of connection and fix the connection. The fitting line distributing must be consistent with the indoor unit, terminal of line bank.
   Wiring should meet that of indoor unit.
3. Fix power connection wire by wire clamp.
4. Ensure wire has been fixed well.
5. Install the handle.



⚠ An all-pole disconnection switch having a contact separation of at least 0.12inch in all pole should be connected in fixed wiring.

⚠ Wrong wire connection may cause malfunction of some electric components.After fixing cable, ensure that leads between connection to fixed point have some space.

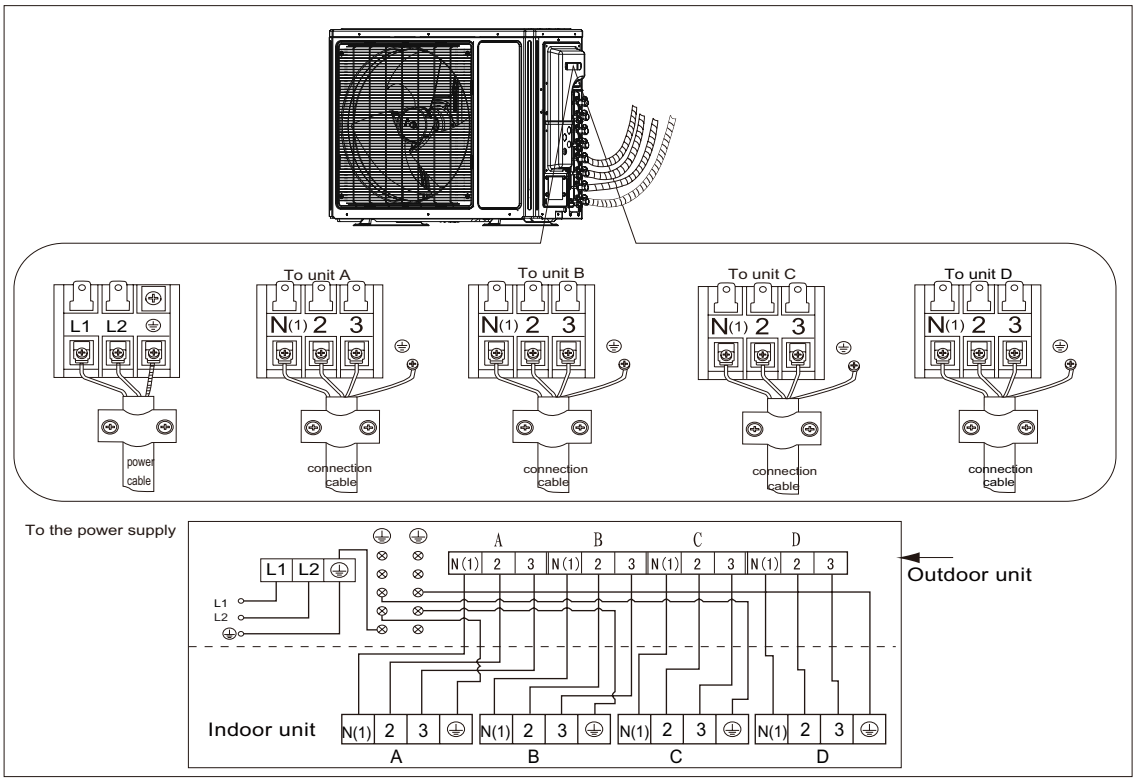
⚠ The connect ion pipe s and the connectiong wirings of the unit A ,unit B,unit C and unit D must be corresponding to each other respective.

⚠ The appliance shall be installed in accordance with national wiring regulations.

⚠ Do not install the outdoor unit where it is exposed to the sunlight.

1) The power cable should be put in from the hole under connection cable cover.
2) If connecting with two indoor units, the connection cable should be put in from hole A and hole B
3) If connecting with three indoor units, the connection cable should be put in from hole A , B and C
4) If connecting with four indoor units, the connection cable should be put in from hole A, B , C and D.

All power cables and connection cables must be protected with conduits.



HANDLING

⚠ After having removed the packaging, check that the contents are intact and complete.
The outdoor unit must always be kept up right.

⚠ Handling must be done by suitablye quipped qualified technical personnel using equipment that is suitable for the weight of the appliance.

8.4 Check after Installation

Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	May cause condensation and water dropping
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may bread down or the components may be burned out
Are the lines and pipelines correctly installed?	The unit may bread down or the components may be burned out
Has the unit been safely grounded?	Risk of electrical leakage.
Are the models of lines in conformity with requirements?	The unit may bread down or the components may be burned out
Are there any obstacles near the air inlet and outlet of the indoor and outdoor units?	The unit may bread down or the components may be burned out
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	It is not easy to decide the charge amount of refrigerant.